

ABSTRACT

A mechanical resonator is constructed such that it has a vibration body (1) that performs a mechanical resonant vibration and also has an electrode (2) located in the vicinity of the vibration body (1) and such that it is shaped into the surface shape of the electrode (2) when deformed during a resonance mode of the vibration body (1), whereby the electrostatic capacitance change per unit vibration displacement amount can be enlarged. In this way, a mechanical resonator can be realized which performs an effective electricity-to-machine or machine-to-electricity conversion. Moreover, this mechanical resonator can be used to realize a small-sized, high-performance filter circuit or switch circuit in a high-density integrated electrical circuit.